Department of Mechanical Engineering
Indian Institute of Technology Delhi

23 September 2011

Quotations are invited for gap-cum-shaft vibration sensor for spindle with following specifications.

The sensors for non-contact measurement of rotating machine tool spindle should satisfy the following requirements:

1. The sensor should be able to measure gap as well as vibrations of a stationary shaft or rotating shaft up to 10,000 rpm.
2. Frequency range of interest: 0 to 25 KHz (-3dB)
3. Resolution: 0.03 μm or better
4. Measuring range: 0.5 mm
5. Linearity: ±0.25% of Full scale output or better
6. Probe size: probe tip diameter not more than 2.5 mm and probe threaded part with M3/equivalent or smaller thread
7. Sensitivity: may be specified in volt/micron
8. Temperature range for sensors and cables: -50^{o}C to 150˚C; Temperature compensation range: 10-65^{0}C
9. Cable length: minimum 3 meters.
10. Electromagnetic compatibility: EN 50081-2
11. Target Material: Steel EN-353. However, the same sensor system should be adjustable for other ferro or non-ferromagnetic materials.
12. Synchronization of separate channels should be possible.
13. Protection class: Electronics IP 54 Sensors IP 65

Each sensor system should be quoted as a bundle of sensor, sensor cable and associated signal conditioning unit. The reference material to which the technical specifications apply should be explicitly mentioned in detail.

Alternate models of similar range may be quoted separately. Recommended accessories (e.g., calibration unit, synchronization cable, etc) may be separately quoted.

Clearly marked sealed quotations (with separate sealedtechnical and price bids) should be submitted on or before 7^{h} October 2011 to the undersigned. Both the FOB and CIF New Delhi prices should be quoted with agency certificate, proprietary certificate (as applicable), payment terms and delivery schedule.

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